

BOTANICAL COLLECTING RAMBLES WITH  
PROF. ERIC HULTEN IN THE ALEUTIAN ISLANDS

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As a naturalist and biological collector in many lands, I have worked with several notable biologists of the Swedish Riksmuseum which I visited twice after journeying through the U.S.S.R.

My first great inspiration in tropical collecting was during nearly five months in Haiti as constant companion of Dr. Eric Ekman. He was the unexcelled botanist of West Indian flora and a fine naturalist. Although excentric in many ways, he was one of the greatest naturalistic friends I have ever had, and his untimely death in the jungles of the Dominican Republic in 1930 was a great shock to me, as we had planned to be together again in Venezuela. On two excursions around the world, while stopping in Western Europe, I visited Ekman's two other collaborating colleagues of the West Indian Botanical Triumvirate, as he called them. These were Professor Gunnar Samuelsson, Curator of Botany at the Riksmuseum, and Professor Ignatz Urban of Berlin-Dahlem. Dr. Urban, on both of my visits to him, talked only of Ekman and his marvelous botanical collecting. He idolized him. I remember that Ekman had been offered the position as director of the Botanical Museum of Riksmuseum, but he would not give up his carefree life in the jungles of Haiti, to which he had become adapted. He lived and died for his botanical ideal.

In 1925, while engaged as cooper on the schooner *Apollo* for the Siberian Fish and Cold Storage Company, I was impressed by the luxuriant and rich Kamchatka flora. There, on several occasions, I met Dr. Rene Malise and Mr. Schoblum. They were members of Hulten's notable Swedish Kamchatka Expedition which landed in that far-off northern land, in the midst of the Russian Revolution in progress. Hulten's superb *Flora of Kamtchatka* was richly augmented by the extensive collections made by Malaise who stayed in that country for ten years. A large part of the plants collected by Professor T. V. Komarov of the great Riabouschinski Expedition some years before the outbreak of World War I (it was in 1908 and 1909), were made accessible to Dr. Hulten at the Academy of Sciences. *Flora of Kamtchatka* stimulated Komarov to compile and publish his *Flora Peninsulae Kamtschatka* in Russian. All of the known collections of higher plants in U.S.S.R. from Kamchatka are included. The two floras which supplement each other are the foundation and inspiration of Hulten's far more important works, *Flora of the Aleutian Islands* (of which two editions were published), *Flora of Alaska and Yukon*, and his most recent *Flora of Alaska and Neighboring Territories*. In these comprehensive floras, the plant migrations from Asia to North America and vice versa are clearly disig-

nated. No work of this kind had ever before been attempted.

After recovering from a severe attack of malignant malaria and dengue fever in the hospital at Cape Haitian in 1927, I came home to Seattle, which is my native place of birth. A few months afterwards, I took a shipment of muskrats to Karaginsk Island on the coast of Kamchatka. There I spent the summer climbing volcanoes and botanizing the Avatcha region of Kamchatka. My companion, William F. Coultas, and I stayed a good part of the summer of 1928 with our friend Rene Malaise at Savoika, formerly Stari-Ostrog, founded by the Cossack Hetman Atlasov in the 17th century. About 500 species of plants were collected and sent to the Riksmuseum where Hulten added them to his *Flora of Kamtchatka*.

Some months after leaving Kamchatka, Mr. Coultas and I traveled in Manchuria, Inner Mongolia and East Siberia. Eventually we visited the Riksmuseum and there I met Hulten for the first time. On the second visit to the Herbarium, I helped to unpack a large box of plants which one of the Sven Hedin's expeditions had collected in Djungaria—also spelled Dzungaria in N. Sinkiang. A notable species of pink *Taraxacum* was included. Two years afterward, when I was again at the Riksmuseum, I had left the Whitney South Sea Expedition in Papua and on my way to Saarzrücken to be married, Dr. Hulten, Dr. Elizabeth Ekman and I opened another large case of botanical specimens that Sven Hedin's expedition had collected in Outer Mongolia. This time the rare prize was a blue *Taraxacum*. On this occasion, I spent two weeks in Stockholm as guest of my good friend Maurice Dunlap, the United States consul. I first knew him in Port-au-Prince, Haiti where he introduced me to Dr. Ekman in 1927.

On my second visit to Stockholm, in December 1930, one evening I was the guest of honor of Professor Sixten Bock at the Travellers' Club. The program lasted from 8:00 P.M. until 4:00 A.M. and every minute of the time was enjoyed and appreciated. One of the highlights of the evening was the fine series of pictures on the screen that Dr. Malaise had made in Kamchatka during his ten years in that most interesting country.

While at the Riksmuseum, Hulten made definite plans with me to botanize the Kodiak and Aleutian Islands and the Alaska Peninsula. A comparatively thorough collecting of vascular plants in this difficult region was a positive necessity in order to work out an understandable and workable theory as to the plant migrations across the Bering Sea.

Hulten, as a young graduate student in botany with his bride, undertook the Swedish Kamchatka Expedition, together with the biologists Malaise, Bergman and Schoblum. This was right in the time of the Revolution in 1920–22. As respected neutrals engaged in important scientific explorations, the Swedes were not molested by either warring factions and were usually received with hospitality wherever it was possible to be given. Sometimes they found themselves in the fighting zone of either

side and they saw considerable bloodshed and misery in this hitherto peaceful land. In spite of many privations and lack of contact with the outside world, and in spite of the rigorous climate and numerous hardships, the intrepid Swedes, full of health and vigor, a keen knowledge of the known biota of Kamchatka and of the data compiled by all previous explorers of the region, accomplished more than any other botanical expeditions to N.E. Siberia. Although a good many botanists had collected plants in Kamchatka since the first collections in the seventeenth-forties by George W. Steller and S. Krascheninikoff, only Komarov had accomplished extensive plant explorations before Hulten.

Additional incentive toward a more thorough knowledge of the Kamchatka Peninsula and the whole North Pacific region, including the Kurile Islands and the Bering Sea, was evidently inspired by the far-reaching results of the voyage of the *Vega* in 1878 and 1879 and the remarkably rich collections of cryptogamic flora made by Kjellmann in the Bering Sea region.

With the four volumes of *Flora of Kamtchatka* finished and published in 1930, Hulten made definite plans for a comprehensive botanical survey of the Aleutian and Kodiak Islands. This was accomplished on our excursions to these islands in 1931 and 1932.

In 1930 I had resigned as ornithological member of the Whitney South Sea Expedition after nearly two years in Western Melanesia, so I could be married in Saarbrücken. Arriving in America with my bride, I had not known before that my country was in the throes of the lowest financial depression. Over six thousand banks had been closed in a week's time when the depression struck and industry had come to almost a dead stop. Millions of people were glad to work for subsistence only. In Seattle there was one large floating herring saltery ready to leave for Alaska. It was the converted steamer *Donna Lane*. The owner was an old friend of mine, Jens Jenson. We agreed that I should work two days per week as cooper for my board and transportation. I had plenty of collecting equipment and several good contracts from museums for plants and fishes. Aboard the *Donna Lane* was a new friend, Ingvar Norberg, from Tromsø, Norway. He had accompanied his father on two excursions to Spitzbergen while making his notable fossil plant collections for Professor Nathorst of the Riksmuseum, Stockholm, in the coal measures. I stopped for the summer at Port Hobron on Sitkalidak Island while Norberg went farther on to the whaling station at Akutan in the Aleutians where the *Donna Lane* operated. Norberg was keenly interested in my work with Hulten so he agreed to collect plants for him on Akutan Island. I gave him plenty of driers and other equipment. In subsequent years, during many seasons, he continued to collect plants for Hulten at many stations in Alaska where he was employed as carpenter, and added several new species to the flora. I collected plants in 1931, mostly on Sitkalidak Island and on Kodiak Island in the areas about Three Saints Bay and Old Harbour and Seldovia on Kenai Peninsula. On one

occasion, I had undertaken too much of a journey in one day, and while night overtook me, I became lost in thick alder brush with a pack frame full of plants on my back. I nearly fell headlong over a huge sleeping Kodiak Grizzly bear who suddenly rose up before me on his hind legs. He let out a great snarl and a grunt of surprise. Needless to say, I was very frightened, too, especially because only ten minutes before, I had lost my good hunting knife that I had carried on all outings since I was fifteen years old. The rest of the cold, drizzly night, I struggled around through the tangled alder brush.

The next year, in 1932, Hulten came to Seattle to my home where he visited about ten days before we started on the Aleutian Island botanical excursion. He had just spent most of the winter collecting plants on the volcanoes, Nevada del Toluca and Iztaccihuatl and around Mazatlan and other parts of West Mexico.

We went north on the *Tahoe*, the flagship of the Coast Guard, as guests of Commander Boeddecker and Captain Towle. It was still quite wintery when we arrived at Unalaska on May second, where we established our main base, leaving our provisions, extra collecting supplies and surplus baggage and botanical specimens at the cabin which we rented for five months.

During May and June, Hulten and I were very busy collecting the rich cryptogamic flora, including marine algae around Unalaska and Dutch Harbor. Captains' Harbour proved especially rich in mosses and lichens. Unlike some parts of coastal Alaska, notably the Prince William Sound region, the Aleutian Islands are poorly represented in hepatic species. Surprisingly few were noted and collected. A few grasses and early sedges were about all of the flowering plants in bloom before the last week in June. A week or two later nearly all the coastal flowers bloom at one time. In July, the Aleutians are carpeted with beautiful flowers and the botanist must work long hours of overtime if he would accomplish a good season of plant collecting.

While we waited for the flowers to come into bloom, and for the Alaska Commercial Co. trading boat *Eunice* to get ready for the long trip to Attu Island, we did about ten days' of excavating in an Aleut stone-age village of pre-Russian occupation. I did most of the pick and shovel work, while Hulten did the sifting, photographing and recording of specimens. Several hundred artifacts, mostly of stone, were collected and sent to the Riksmuseum. Records of all species of mammals, birds and marine invertebrates used as food were also made. Distinct evidences of cannibalism were also noted as charred human jaw bones and arm and leg bones were not uncommon in the middens.

Several years later Dr. Ales Hrdlicka, chief anthropologist of the Smithsonian Institution, spent a whole summer with an expedition, carrying on the work where we left off. In his fine, large volume, finished after his death, on the Aleutian Islands and their inhabitants, he de-

scribes all of his archaeological work in the islands and records and photographs of all of the best artifacts.

During World War II, after the Japanese bombed Dutch Harbour, our military diligently went to work and made a real naval base at this spot. A great deal of excavating with big bulldozers in the vicinity unearthed an exceedingly rich archaeological site in an area where no digging had been performed before. Unfortunately, most of this treasure was destroyed by using the artifact-laden earth for filling hollows, etc. No trained scientist was at hand to salvage the material.

Dutch Harbour, on the small Amoknak Island, is hardly a mile from Unalaska Village. There is a rather steep mountain near Dutch Harbour called "Ballyhoo." One day, the Coast Guard ship *Chelan* arrived from Honolulu. The guest passenger was Captain Kirschhaus, ex-German enemy captain of the famous ocean raider, the *Sea Adler*, of which Count von Luckner was the commander. He had come on another ship direct from a survey of the Antarctic whaling grounds to Honolulu. At dinner parties on several occasions, he regaled Dr. Hulten and the American officers with accounts of the daring exploits of the *Sea Adler*. While on a climbing ramble to the top of "Balyhoo," Hulten, in quest of plants, and the captain, for exercise, a spirited debate was carried on between the two in discussing the merits of which was more important to society, a learned botanist, or an important military man. Each, of course, could see only his own profession as the more important. Today, at least in the larger countries, nearly all governments relegate all branches of science to the support of militarism.

In the first week of July, Hulten and I left Unalaska on the *Eunice* for the more westerly islands. I stopped on Atka Island where I collected plants for two weeks, including Amlia Island. Hulten went on to Attu, but it was still too early for flowering plants. Later in the summer, he went out there again on one of the Coast Guard boats and collected most of the flowering plants. He was thus able to properly compare the plants of this floristically important island with those of the nearby Commandorski Islands and Kamchatka. On his return from the first foray to Attu, Hulten also made short collecting forays on Agattu, Buldir, Kanaga, Amchitka, Adak, Amlia and Umnak, Alaid and Rat Islands. On account of the difficult landings and general bad weather, some of these stops were very brief. A good example of a brief excursion was a stop-off of less than three hours, that we made together onto the fog-drenched, difficult of approach, Carlisle Island in the Four Mountain groups of Islands. We both went in different directions as we nearly always did, to achieve maximum collecting results. In that short time, more than 100 species of plants were collected.

At that time most of the Aleutian Islands were uninhabited and the aggregate population west of Unalaska was probably less than 300 and composed mostly of native hunters and trappers. Not over a dozen white people lived in this area. Usually there were trappers' winter cabins on the larger islands which we sometimes used with the permission

of the natives. On Rat Island, Hulten saw the rats come down to the beaches in great numbers to eat cast up fish and algae.

The Aleutian Islands are well known for their frequent storms, cold fog and general inhospitable weather conditions. Before the war, with very little transportation between islands and with poor living accommodations, results of Hulten's collecting were surprisingly good in the short summer season. Without assistants and working our separate areas, our joint efforts resulted in an aggregate of nearly 20,000 sheets of all kinds of plants, besides collections of bird and mammal skins, marine invertebrate and fishes and archaeogocical and ethnographical specimens, besides the fine large series of photos that Hulten made. Of the 525 or more species and varieties of plants recorded from the Aleutians from the time of the Bering Expedition, we found about 500 of the known vascular plants and over 20 new species and varieties. Many more have been added since 1932.

No botanical expedition had ever entertained such an ambitious program as Hulten had undertaken, first, by studying and knowing all of the flowering plants of Scandinavia and Northern Europe and exploring Kamchatka and the Aleutian Islands with the fulfillment of a life's ambition of the resultant climax of producing *Flora of Alaska and Yukon* in ten volumes. This comprehensive work records the collections of nearly all botanists and collectors that had collected botanical specimens in this vast area since the Bering Expedition. Hulten continued plant exploration in Alaska and the Yukon through 1965.

In the subsequent years of 1939, 1940, 1945, 1946, 1947, 1948, 1950, 1951, 1952, 1953, 1954, 1955, 1956, I worked in various herring reduction plants in Alaska and always made rather extensive collections of plants which were sent to Hulten for recording in the *Flora of Alaska and Yukon*. In 1947 at Port San Juan, Evans Island in Prince William Sound, I found a record-size skunk cabbage leaf, *Lysichiton americanum* Hulten & St. John. The previous record-size found by J. P. Anderson was 4'10". This one stood erect and measured 6'2½" in length. I measured it nearly every day after it had exceeded Anderson's record until it stopped growing.

Since the war, the Aleutians are in many places well inhabited and numerous military bases had been established as well as easy and quick transportation. Many botanists have collected in the islands but not over two dozen species of the higher plants have been added to the flora of the islands. However, much botanical exploration in the more inaccessible interiors of many of the islands should eventually increase the number of species.

As Dr. Eric Ekman is recognized today as the foremost of the West Indian botanists, so it must also be recognized that Professor Eric Hulten is without comparison the foremost of all botanists of the circumboreal flora of the world.